

Research Note

# A study about the knowledge of farmers to diversify agriculture to meet the future challenges

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**SUMMARY :** The study conducted to focus the farmers knowledge regarding diversify their cropping pattern, farming system and land use planning to meet the future challenges before the human beings such as declining area of arable land due to population growth, fragmentation of land, water problem for irrigation to the crops, problem of environment disbalance etc. The current situation in India is very alarming about farm productivity and production level that is quite low consequently import of food grains may possible to meet the domestic needs to growing population very fast. The first and the foremost challenge are to overcome food shortage and stop imports of eatable oil and other things. It is made possible by providing farmers with sound scientific knowledge and inputs to enhance farm productivity. High priority is accorded towards developing national capacity where in along with infrastructure, greater role of agricultural research and education is realized and emphasized. An effort made to analyze farmer's knowledge of diversified agriculture through Uttar Pradesh Diversified Support Project in state of Uttar Pradesh to prevent losses to the farmers and get more profit to meet the future demand. It is necessary to use the land by adopting various innovative activities. There is need to diversify the agriculture so as to achieve more gain per unit of land. Covering all aspect of these challenges a study was conducted in western Uttar Pradesh. An interview schedule was used to collect data from a sample of 200 farmers. Out of 200 farmers 100 were adopters and other 100 were non-adopters. It was observed that 8 per cent adopters and 81 per cent non - adopters were having poor knowledge and 63 per cent adopters and 17 per cent non - adopters were having good knowledge of diversification whereas 29 per cent adopters and only 2 per cent non- adopters were having very good knowledge of diversification regarding their farming system.

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Agriculture, as the largest private enterprise in India having more than 10 crore farm holdings and 69 per cent population live in rural areas majority depend on agriculture. It contributes nearly 14 per cent to the national gross domestic product (GDP) sustains livelihood of about two-thirds of the population, provides direct employment to about 234 million people (cultivators and agricultural labourers) and forms the backbone of the agro-based industry. Besides, agriculture is a social sector where non-trading concerns like food and nutritional security, employment and income generation, poverty alleviation, gender equity, ecology and environment

plays a significant role.

In India the higher unemployment and low income in the rural areas results in low purchasing power of the rural people, ultimately affecting their quality of life. According to the data of National Sample Survey report unemployment which was 7.2 per cent in the year 2000, increased to 8.1 per cent in 2010 in comparison to urban unemployment rate which increased from 7.7 to 7.9 per cent during the same period. The percentage of unemployment is gradually increasing at very fast rate. An other survey of National Sample Survey (NSS) shows that about 7 crore people are unemployed in year 2000. The

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census of India 2011 estimates that 83 million people live below poverty line in rural areas. These findings indicate that there are need to generate employment and increase agricultural productivity in agriculture and allied industry to improve economic prosperity and overall development of Indian people.

District 'Baghpat' of western Uttar Pradesh was selected purposively to investigate different aspects of diversification of crops through Uttar Pradesh Diversified Agricultural Support Project (UPDASP). Two blocks namely Baghpat and Pilana were selected by using simple random method of sampling. Ten villages were selected from each block using simple random method of sampling. Thus, a total of twenty villages were selected for this study. Lists of villagers were obtained from the V.D.O. for the selection of respondents. These lists of villagers divided into two parts, adopters and non-adopters. Five adopters and five non-adopters were selected randomly from each village, total ten respondents from each village selected. Thus, one hundred adopters and one hundred non-adopters were selected for the study.

To determine the knowledge of respondents about diversified agriculture, fourteen questions were designed from which ten question were retained to use in scale of knowledge for further study. The correct answer was given a score of '1' and false answer carry '0' (Zero) marks.

Following criteria was used for making categories of respondents about the knowledge.

Knowledge of an individual is directly related to the profile in the society and also effect the adoption of any technology. So this part is devoted to description and comparison of knowledge of adopters (diversifiers) and non-adopters (non-diversifiers). The following table shows the distribution of knowledge categories of respondents toward diversification of crops.

From the Table 3 it is observed, that 8 per cent adopters and 81 per cent non-adopters were having poor knowledge and 63 per cent adopters and 17 per cent non adopters were having good knowledge of diversification of crops where as 29 per cent adopters and 2 per cent non adopters were having very good knowledge of diversification of crops.

To test the significant difference between adopters and non-adopters Null hypothesis (Ho) was formed that there was no significant difference between adopters and non- adopters regarding their knowledge about diversification of crops. For testing Null hypothesis Table 4 shows the total score, mean score, standard deviation variance and calculated value of 't' for knowledge for respondents about diversification of crops.

From the Table 4 it is observed that calculated value of 't' was 16.5 and that was more than tabulated value of 't' (1.75). Therefore, the Null hypothesis was rejected. Hence,

**Table 1: Showing summarise data of selected blocks**

Sr.No.	Name of blocks	No. of villages	No. of adopters	No. of non- adopters	Total
1.	Baghpat	10	50	50	100
2.	Pilana	10	50	50	100
3.	Total	20	100	100	200

**Table 2: Showing scoring criteria of knowledge of the respondents**

Scores of knowledge	Categories of respondents
0 – 4	Poor
4 – 8	Good
8 – 10	Very good

**Table 3: Showing categories of knowledge of respondents**

Sr.No.	Score interval	Categories	Adopters		Non adopters	
			Number	Per cent	Number	Per cent
1.	0 – 4	Poor	08	08	81	81
2.	4 – 8	Good	63	63	17	17
3.	8 – 10	Very good	29	29	2	2
	Total		100	100	100	100

**Table 4 : Showing total score, mean score, standard deviation, variance value of 't' of knowledge of respondents**

Sr. No.	Particulars	Adopters	Non-adopters
1.	Total score	642	361
2.	Mean score	6.42	3.61
3.	Standard deviation	1.14	1.29
4.	Variance	1.30	1.65
5.	Calculated 't' value	16.50	

there was significant difference between adopters and non-adopters regarding their knowledge about diversification of crops. The role of socio-economic factors on the adoption of sprinkler irrigation in Bhiwani district Haryana was studied by Hooda (1992).

### Conclusion:

Majority of the adopter respondents *i.e.* 63 per cent adopters were having good knowledge of diversification of crops where as 29 per cent adopters were having very good knowledge of diversification of crops. The study was also revealed that there was significant difference between adopters and non-adopters regarding their knowledge of diversification of crops. Hence, conclusion may be drawn from the study that knowledge played very important role to promote farmers for adopting diversified farming for development of people in rural areas.

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